

**Amendments to the Claims:**

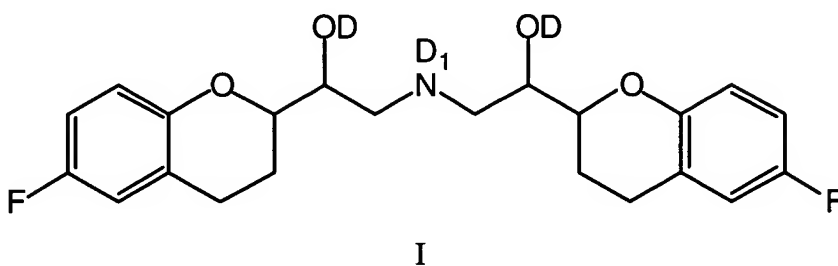
This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1 – 2 (Cancelled)

3. (Previously Amended) A compound of Formula (I), Formula (IV) or Formula (V),  
an isomer thereof or a pharmaceutically acceptable salt thereof:

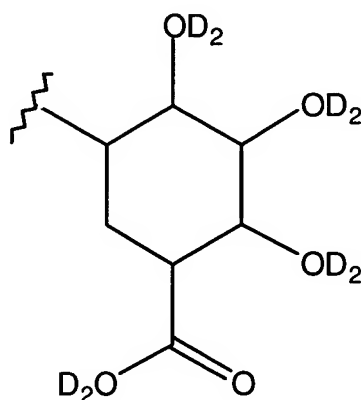
wherein the compound of Formula (I) is:



wherein:

D is hydrogen, Q, K or R<sub>5</sub>;

R<sub>5</sub> is:



D<sub>1</sub> is hydrogen or R<sub>5</sub>;

D<sub>2</sub> is hydrogen, Q or K;

Q is -NO or -NO<sub>2</sub>;

K is -W<sub>a</sub>-E<sub>b</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>p</sub>-E<sub>c</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>x</sub>-W<sub>d</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>y</sub>-W<sub>i</sub>-E<sub>j</sub>-W<sub>g</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>z</sub>-T-Q;

a, b, c, d, g, i and j are each independently an integer from 0 to 3;

p, x, y and z are each independently an integer from 0 to 10;

W at each occurrence is independently -C(O)-, -C(S)-, -T-, -(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>h</sub>-, an alkyl group, an aryl group, a heterocyclic ring, an arylheterocyclic ring, or -(CH<sub>2</sub>CH<sub>2</sub>O)<sub>q</sub>-;

E at each occurrence is independently -T-, an alkyl group, an aryl group, -(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>h</sub>-, a heterocyclic ring, an arylheterocyclic ring, or -(CH<sub>2</sub>CH<sub>2</sub>O)<sub>q</sub>-;

h is an integer from 1 to 10;

q is an integer from 1 to 5;

R<sub>e</sub> and R<sub>f</sub> are each independently a hydrogen, an alkyl, a cycloalkoxy, a halogen, a hydroxy, an hydroxyalkyl, an alkoxyalkyl, an arylheterocyclic ring, an alkylaryl, an alkylcycloalkyl, an alkylheterocyclic ring, a cycloalkylalkyl, a cycloalkylthio, a cycloalkenyl, an heterocyclicalkyl, an alkoxy, a haloalkoxy, an amino, an alkylamino, a dialkylamino, an arylamino, a diarylamino, an alkylarylamino, an alkoxyhaloalkyl, a haloalkoxy, a sulfonic acid, a sulfonic ester, an alkylsulfonic acid, an arylsulfonic acid, an arylalkoxy, an alkylthio, an arylthio, a cyano, an aminoalkyl, an aminoaryl, an aryl, an arylalkyl, an alkylaryl, a carboxamido, an alkylcarboxamido, an arylcarboxamido, an amidyl, a carboxyl, a carbamoyl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarbonyl, an arylcarbonyl, an ester, a carboxylic ester, an alkylcarboxylic ester, an arylcarboxylic ester, a haloalkoxy, a sulfonamido, an alkylsulfonamido, an arylsulfonamido, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfonyl, arylsulphonyloxy, a sulfonic ester, a urea, a phosphoryl, a nitro, W<sub>h</sub>, -T-Q, or -(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>k</sub>-T-Q, or R<sub>e</sub> and R<sub>f</sub> taken together with the carbons to which they are attached form a carbonyl, a methanthial, a heterocyclic ring, a cycloalkyl group, an aryl group, an oxime or a bridged cycloalkyl group;

k is an integer from 1 to 3;

T at each occurrence is independently a covalent bond, a carbonyl, an oxygen, -S(O)<sub>o</sub>- or -N(R<sub>a</sub>)R<sub>i</sub>-;

o is an integer from 0 to 2;

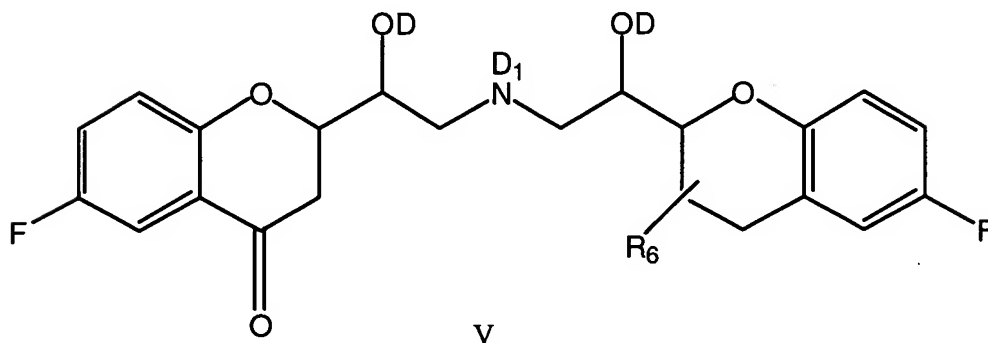
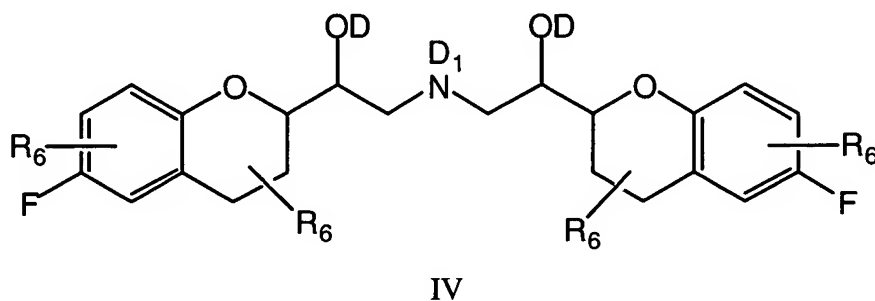
R<sub>a</sub> is a lone pair of electrons, a hydrogen or an alkyl group;

R<sub>i</sub> is a hydrogen, an alkyl, an aryl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarboxylic ester, an arylcarboxylic ester, an alkylcarboxamido, an arylcarboxamido, an alkylaryl, an alkylsulfinyl, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfinyl, an arylsulfonyl, arylsulphonyloxy, a sulfonamido, a carboxamido, a carboxylic ester, an aminoalkyl, an

aminoaryl,  $-\text{CH}_2-\text{C}(\text{T}-\text{Q})(\text{R}_e)(\text{R}_f)$ , a bond to an adjacent atom creating a double bond to that atom,  $-(\text{N}_2\text{O}_2)^-\cdot\text{M}^+$ , wherein  $\text{M}^+$  is an organic or inorganic cation;

with the proviso that the compound of Formula (I) must contain at least one nitrite, nitrate, thionitrite or thionitrate group;

wherein the compounds of Formula (IV) and Formula (V) are:



wherein:

$\text{R}_6$  at each occurrence is independently a hydrogen, a hydroxy or  $-\text{OD}$ ;

$\text{D}$  and  $\text{D}_1$  are as defined herein; and

with the proviso that the compounds of Formula (IV) and Formula (V), must contain at least one nitrite, nitrate, thionitrite or thionitrate group.

4. (Previously Amended) The compound of claim 3, wherein the compound of Formula (I) is a nitrosated nebivolol, a nitrosylated nebivolol, or a nitrosated and nitrosylated

nebivolol, wherein the compounds of Formula (IV) and Formula (V) are a nitrosated metabolite of nebivolol, a nitrosylated metabolite of nebivolol, or a nitrosated and nitrosylated metabolite of nebivolol.

5. (Original) A composition comprising the compound of claim 3 and a pharmaceutically acceptable carrier.

6. (Currently Amended) A method of treating hypertension ~~a vascular disease due to nitric oxide insufficiency~~ in a patient in need thereof comprising administering a therapeutically effective amount of the composition of claim 5.

7-10 (Cancelled)

11. (Original) The method of claim 6, wherein the composition is administered intravenously, orally, buccally, parenterally, by an inhalation spray, by topical application or transdermally.

12-15 (Cancelled)

16. (Currently Amended) ~~The composition of claim 15, wherein the at least one compound that donates, transfers, or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium-derived relaxing factor or is a substrate for nitric oxide synthase is~~ The composition of claim 5, further comprising an S-nitrosothiol.

17. (Original) The composition of claim 16, wherein the S-nitrosothiol is S-nitroso-N-acetylcysteine, S-nitroso-captopril, S-nitroso-N-acetylpenicillamine, S-nitroso-homocysteine, S-nitroso-cysteine, S-nitroso-glutathione or S-nitroso-cysteinyl-glycine.

18. (Original) The composition of claim 16, wherein the S-nitrosothiol is:

- (i)  $\text{HS}(\text{C}(\text{R}_e)(\text{R}_f))_m\text{SNO}$ ;
- (ii)  $\text{ONS}(\text{C}(\text{R}_e)(\text{R}_f))_m\text{R}_e$ ; and
- (iii)  $\text{H}_2\text{N}-\text{CH}(\text{CO}_2\text{H})-(\text{CH}_2)_m-\text{C}(\text{O})\text{NH}-\text{CH}(\text{CH}_2\text{SNO})-\text{C}(\text{O})\text{NH}-\text{CH}_2-\text{CO}_2\text{H}$ ;

wherein m is an integer from 2 to 20;  $\text{R}_e$  and  $\text{R}_f$  are each independently a hydrogen, an alkyl, a cycloalkoxy, a halogen, a hydroxy, an hydroxyalkyl, an alkoxyalkyl, an arylheterocyclic ring, an alkylaryl, an alkylcycloalkyl, an alkylheterocyclic ring, a cycloalkylalkyl, a cycloalkylthio, a cycloalkenyl, an heterocyclicalkyl, an alkoxy, a haloalkoxy, an amino, an alkylamino, a dialkylamino, an arylamino, a diarylamino, an alkylarylramino, an alkoxyhaloalkyl, a haloalkoxy, a sulfonic acid, a sulfonic ester, an alkylsulfonic acid, an arylsulfonic acid, an arylalkoxy, an alkylthio, an arylthio, a cyano an aminoalkyl, an aminoaryl, an aryl, an arylalkyl,

an alkylaryl, a carboxamido, an alkylcarboxamido, an arylcarboxamido, an amidyl, a carboxyl, a carbamoyl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarbonyl, an arylcarbonyl, an ester, a carboxylic ester, an alkylcarboxylic ester, an arylcarboxylic ester, a haloalkoxy, a sulfonamido, an alkylsulfonamido, an arylsulfonamido, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfonyl, arylsulphonyloxy, a sulfonic ester, a urea, a phosphoryl, a nitro,  $W_h$ , -T-Q, or - $(C(R_e)(R_f))_k$ -T-Q, or  $R_e$  and  $R_f$  taken together with the carbons to which they are attached form a carbonyl, a methanthial, a heterocyclic ring, a cycloalkyl group, an aryl group, an oxime or a bridged cycloalkyl group; Q is -NO or -NO<sub>2</sub>; and T is independently a covalent bond, a carbonyl, an oxygen, -S(O)<sub>o</sub>- or -N(R<sub>a</sub>)R<sub>i</sub>-; wherein o is an integer from 0 to 2; R<sub>a</sub> is a lone pair of electrons, a hydrogen or an alkyl group; R<sub>i</sub> is a hydrogen, an alkyl, an aryl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarboxylic ester, an arylcarboxylic ester, an alkylcarboxamido, an arylcarboxamido, an alkylaryl, an alkylsulfinyl, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfinyl, an arylsulfonyl, arylsulphonyloxy, a sulfonamido, a carboxamido, a carboxylic ester, an aminoalkyl, an aminoaryl, -CH<sub>2</sub>-C(T-Q)(R<sub>e</sub>)(R<sub>f</sub>), a bond to an adjacent atom creating a double bond to that atom, -(N<sub>2</sub>O<sub>2</sub>)<sup>-</sup>•M<sup>+</sup>, wherein M<sup>+</sup> is an organic or inorganic cation; with the proviso that when R<sub>i</sub> is -CH<sub>2</sub>-C(T-Q)(R<sub>e</sub>)(R<sub>f</sub>) or -(N<sub>2</sub>O<sub>2</sub>)<sup>-</sup>•M<sup>+</sup>; then "-T-Q" can be a hydrogen, an alkyl group, an alkoxyalkyl group, an aminoalkyl group, a hydroxy group or an aryl group.

19. (Currently Amended) ~~The composition of claim 15, wherein the at least one compound that donates, transfers, or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase is:~~

- ~~(i) — a compound that comprises at least one ON-O, ON-N or ON-C group;~~
- ~~(ii) — a compound that comprises at least one O<sub>2</sub>N-O, O<sub>2</sub>N-N, O<sub>2</sub>N-S or O<sub>2</sub>N-C group;~~

(iii) The composition of claim 5, further comprising a N-oxo-N-nitrosoamine having the formula: R<sup>1</sup>R<sup>2</sup>N-N(O-M<sup>+</sup>)-NO, wherein R<sup>1</sup> and R<sup>2</sup> are each independently a polypeptide, an amino acid, a sugar, an oligonucleotide, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted hydrocarbon, or a heterocyclic group, and M<sup>+</sup> is an organic or inorganic cation.

20. (Currently Amended) ~~The composition of claim 19, wherein the compound comprising at least one ON-O, ON-N or ON-C group is~~ The composition of claim 5, further comprising an ON-O-polypeptide, an ON-N-polypeptide, an ON-C-polypeptide, an ON-O-amino acid, an ON-N-amino acid, an ON-C-amino acid, an ON-O-sugar, an ON-N-sugar, an ON-C-sugar, an ON-O-oligonucleotide, an ON-N-oligonucleotide, an ON-C-oligonucleotide, a straight or branched, saturated or unsaturated, substituted or unsubstituted, aliphatic or aromatic ON-O-hydrocarbon, a straight or branched, saturated or unsaturated, substituted or unsubstituted, aliphatic or aromatic ON-N-hydrocarbon, a straight or branched, saturated or unsaturated, substituted or unsubstituted, aliphatic or aromatic ON-C-hydrocarbon, an ON-O-heterocyclic compound, an ON-N-heterocyclic compound or a ON-C-heterocyclic compound.

21. (Currently Amended) ~~The composition of claim 19, wherein compound comprising at least one O<sub>2</sub>N-O, O<sub>2</sub>N-N, O<sub>2</sub>N-S or O<sub>2</sub>N-C group is~~ The composition of claim 5, further comprising an O<sub>2</sub>N-O-polypeptide, an O<sub>2</sub>N-N-polypeptide, an O<sub>2</sub>N-S-polypeptide, an O<sub>2</sub>N-C-polypeptide, an O<sub>2</sub>N-O-amino acid, O<sub>2</sub>N-N-amino acid, O<sub>2</sub>N-S-amino acid, an O<sub>2</sub>N-C-amino acid, an O<sub>2</sub>N-O-sugar, an O<sub>2</sub>N-N-sugar, O<sub>2</sub>N-S-sugar, an O<sub>2</sub>N-C-sugar, an O<sub>2</sub>N-O-oligonucleotide, an O<sub>2</sub>N-N-oligonucleotide, an O<sub>2</sub>N-S-oligonucleotide, an O<sub>2</sub>N-C-oligonucleotide, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted O<sub>2</sub>N-O-hydrocarbon, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted O<sub>2</sub>N-N-hydrocarbon, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted O<sub>2</sub>N-S-hydrocarbon, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted O<sub>2</sub>N-C-hydrocarbon, an O<sub>2</sub>N-O-heterocyclic compound, an O<sub>2</sub>N-N-heterocyclic compound, an O<sub>2</sub>N-S-heterocyclic compound or an O<sub>2</sub>N-C-heterocyclic compound.

22. (Currently Amended) The composition of claim 21, wherein ~~compound comprising at least one O<sub>2</sub>N-O, O<sub>2</sub>N-N, O<sub>2</sub>N-S or O<sub>2</sub>N-C group~~ the O<sub>2</sub>N-O-sugar is isosorbide mononitrate and/or isosorbide dinitrate.

23. (Currently Amended) ~~The composition of claim 15, wherein the at least one compound that donates, transfers, or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium derived relaxing factor, or is a substrate for nitric oxide synthase is,~~ The composition of claim 5, further comprising at least one compound selected from the group consisting of L-arginine, L-homoarginine, N-hydroxy-L-arginine, nitrosated L-

arginine, nitrosylated L-arginine, nitrosated N-hydroxy-L-arginine, nitrosylated N-hydroxy-L-arginine, citrulline, ornithine, glutamine, lysine, polypeptides comprising at least one of these amino acids or inhibitors of the enzyme arginase.

24. (Currently Amended) A method of treating hypertension ~~a vascular disease due to nitric oxide insufficiency~~ in a patient in need thereof comprising administering a therapeutically effective amount of the composition of claim ~~45~~ 16, 19, 20, 21 or 23.

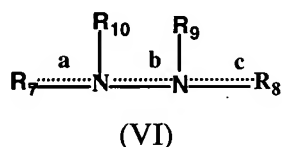
25-28 (Cancelled)

29. (Original) The method of claim 24, wherein the composition is administered intravenously, orally, buccally, parenterally, by an inhalation spray, by topical application or transdermally.

30-34 (Cancelled)

35. (Currently Amended) The composition of claim ~~33~~ 5, further comprising at least one small-molecule antioxidant, or a pharmaceutically acceptable salt thereof, wherein the small-molecule antioxidant is a hydralazine compound of Formula (VI), a glutathione, a vitamin C, a vitamin E, a cysteine, a N-acetyl-cysteine, a  $\beta$ -carotene, an ubiquinone, an ubiquinol-10, a tocopherol, a coenzyme Q, or a mixture thereof;

wherein the hydralazine compound of Formula (VI) is:



wherein a, b and c are independently a single or double bond; R<sub>7</sub> and R<sub>8</sub> are each independently a hydrogen, an alkyl, an ester or a heterocyclic ring; R<sub>9</sub> and R<sub>10</sub> are each independently a lone pair of electrons or a hydrogen; with the proviso that at least one of R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub> and R<sub>10</sub> is not a hydrogen.

36. (Currently Amended) The composition of claim ~~33~~ 5, further comprising at least one antioxidant enzyme, or a pharmaceutically acceptable salt thereof, wherein the antioxidant enzyme is a superoxide dismutase, a catalase, a glutathione peroxidase, or a mixture thereof.

37. (Original) The composition of claim 35, wherein the hydralazine compound is budralazine, cadralazine, dihydralazine, endralazine, hydralazine, pildralazine or todralazine or a pharmaceutically acceptable salt thereof.

38. (Original) The composition of claim 37, wherein the hydralazine compound is hydralazine hydrochloride.

39. (Currently Amended) A method of treating hypertension ~~a vascular disease due to nitric oxide insufficiency~~ in a patient in need thereof comprising administering a therapeutically effective amount of the composition of claim ~~33~~35 or 36.

40-43 (Cancelled)

44. (Original) The method of claim 39, wherein the composition is administered intravenously, orally, buccally, parenterally, by an inhalation spray, by topical application or transdermally.

45-47 (Cancelled)

48. (Currently Amended) The composition of claim ~~35~~35, further comprising at least one ~~nitrosated compound used to treat cardiovascular diseases, wherein the nitrosated compound used to treat cardiovascular diseases is a~~ nitrosated angiotensin-converting enzyme inhibitor, a nitrosated beta-adrenergic blocker, a nitrosated cholesterol reducer, a nitrosated calcium channel blocker, a nitrosated endothelin antagonist, a nitrosated angiotensin II receptor antagonist, or a nitrosated renin inhibitor.

49. (Cancelled)

50. (Currently Amended) A method of treating hypertension ~~a vascular disease due to nitric oxide insufficiency~~ in a patient in need thereof comprising administering a therapeutically effective amount of the composition of claim 48.

51 – 54 (Cancelled)

55. (Original) The method of claim 50, wherein the composition is administered intravenously, orally, buccally, parenterally, by an inhalation spray, by topical application or transdermally.

56 - 58 (Cancelled)

59. (Currently Amended) The composition of claim ~~53~~53, further comprising at least one angiotensin-converting enzyme inhibitor, beta-adrenergic blocker, cholesterol reducer, calcium channel blocker, angiotensin II receptor antagonist, endothelin antagonist, renin inhibitor, or a pharmaceutically acceptable salt thereof.

60. (Cancelled)



61. (Currently Amended) A method of treating hypertension ~~a vascular disease due to nitric oxide insufficiency~~ in a patient in need thereof comprising administering a therapeutically effective amount of the composition of claim 59.

62-65. (Cancelled)

66. (Original) The method of claim 61, wherein the composition is administered intravenously, orally, buccally, parenterally, by an inhalation spray, by topical application or transdermally.

67. (Original) The method of claim 61, further comprising administering a digitalis.

68. (Original) The method of claim 67, wherein the digitalis is digoxin

69. (Original) The method of claim 67, wherein the digoxin is administered in an amount to achieve a blood serum concentration of at least about 0.7 nanograms per milliliter to about 2.0 nanograms per milliliter.

70. (Previously Amended) The method of claim 61 further comprising administering a therapeutically effective edema managing amount of a diuretic compound, wherein the diuretic compound is a thiazide, ethacrynic acid, a furosemide, a spiranolactone, a triamterene, or a mixture thereof.

71 (Cancelled)

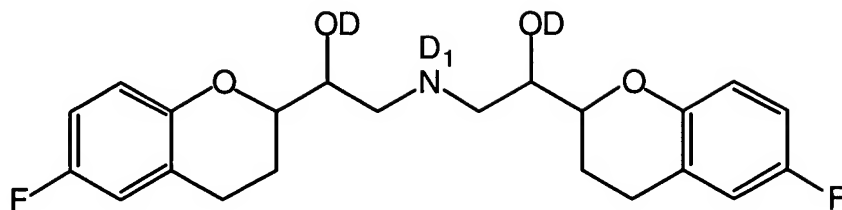
72. (Original) The method of claim 70, further comprising administering a therapeutically effective amount of potassium.

73. (Original) The method of claim 72, wherein the potassium is administered as potassium chloride or by the daily ingestion of foods with high potassium content.

74. (Previously Amended) A composition comprising at least one compound of Formula (I), Formula (IV) or Formula (V), or an isomer thereof, or a pharmaceutically acceptable salt thereof, bound to a matrix;

wherein the matrix is a polymer, a fiber, or a mixture thereof; and

wherein the compound of Formula (I) is:

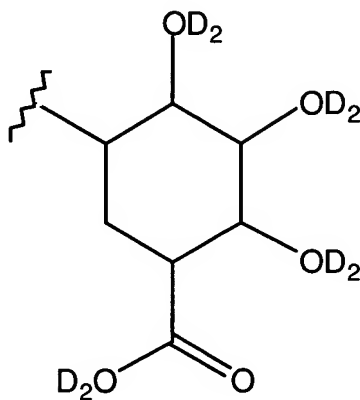


I

wherein:

D is hydrogen, Q, K or R<sub>5</sub>;

R<sub>5</sub> is:



D<sub>1</sub> is hydrogen or R<sub>5</sub>;

D<sub>2</sub> is hydrogen, Q or K;

Q is -NO or -NO<sub>2</sub>;

K is -W<sub>a</sub>-E<sub>b</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>p</sub>-E<sub>c</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>x</sub>-W<sub>d</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>y</sub>-W<sub>i</sub>-E<sub>j</sub>-W<sub>g</sub>-(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>z</sub>-T-Q;

a, b, c, d, g, i and j are each independently an integer from 0 to 3;

p, x, y and z are each independently an integer from 0 to 10;

W at each occurrence is independently -C(O)-, -C(S)-, -T-, -(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>h</sub>-, an alkyl group, an aryl group, a heterocyclic ring, an arylheterocyclic ring, or -(CH<sub>2</sub>CH<sub>2</sub>O)<sub>q</sub>-;

E at each occurrence is independently -T-, an alkyl group, an aryl group, -(C(R<sub>e</sub>)(R<sub>f</sub>))<sub>h</sub>-, a heterocyclic ring, an arylheterocyclic ring, or -(CH<sub>2</sub>CH<sub>2</sub>O)<sub>q</sub>-;

h is an integer from 1 to 10;

q is an integer from 1 to 5;

$R_e$  and  $R_f$  are each independently a hydrogen, an alkyl, a cycloalkoxy, a halogen, a hydroxy, an hydroxyalkyl, an alkoxyalkyl, an arylheterocyclic ring, an alkylaryl, an alkylcycloalkyl, an alkylheterocyclic ring, a cycloalkylalkyl, a cycloalkylthio, a cycloalkenyl, an heterocyclicalkyl, an alkoxy, a haloalkoxy, an amino, an alkylamino, a dialkylamino, an arylamino, a diarylamino, an alkylaryl amino, an alkoxyhaloalkyl, a haloalkoxy, a sulfonic acid, a sulfonic ester, an alkylsulfonic acid, an arylsulfonic acid, an arylalkoxy, an alkylthio, an arylthio, a cyano an aminoalkyl, an aminoaryl, an aryl, an arylalkyl, an alkylaryl, a carboxamido, a alkylcarboxamido, an arylcarboxamido, an amidyl, a carboxyl, a carbamoyl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarbonyl, an arylcarbonyl, an ester, a carboxylic ester, an alkylcarboxylic ester, an arylcarboxylic ester, a haloalkoxy, a sulfonamido, an alkylsulfonamido, an arylsulfonamido, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfonyl, arylsulphonyloxy, a sulfonic ester, a urea, a phosphoryl, a nitro,  $W_h$ , -T-Q, or  $-(C(R_e)(R_f))_k$ -T-Q, or  $R_e$  and  $R_f$  taken together with the carbons to which they are attached form a carbonyl, a methanthial, a heterocyclic ring, a cycloalkyl group, an aryl group, an oxime or a bridged cycloalkyl group;

k is an integer from 1 to 3;

T at each occurrence is independently a covalent bond, a carbonyl, an oxygen,  $-S(O)_o-$  or  $-N(R_a)R_i-$ ;

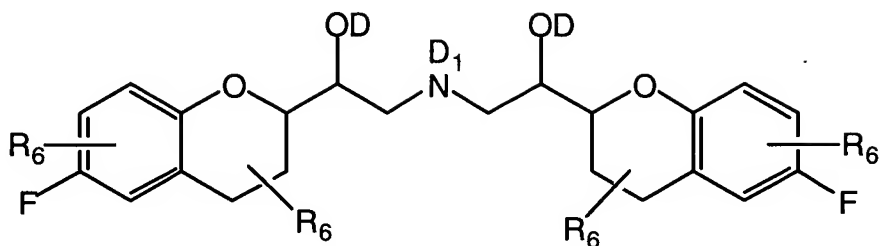
o is an integer from 0 to 2;

$R_a$  is a lone pair of electrons, a hydrogen or an alkyl group;

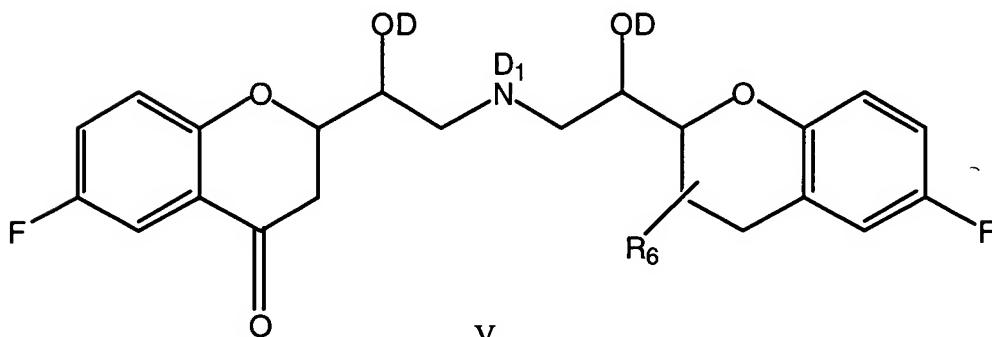
$R_i$  is a hydrogen, an alkyl, an aryl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarboxylic ester, an arylcarboxylic ester, an alkylcarboxamido, an arylcarboxamido, an alkylaryl, an alkylsulfinyl, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfinyl, an arylsulfonyl, arylsulphonyloxy, a sulfonamido, a carboxamido, a carboxylic ester, an aminoalkyl, an aminoaryl,  $-CH_2-C(T-Q)(R_e)(R_f)$ , a bond to an adjacent atom creating a double bond to that atom,  $-(N_2O_2)^- \cdot M^+$ , wherein  $M^+$  is an organic or inorganic cation;

with the proviso that the compound of Formula (I) must contain at least one nitrite, nitrate, thionitrite or thionitrate group;

wherein the compounds of Formula (IV) and Formula (V) are:



IV



V

wherein:

$R_6$  at each occurrence is independently a hydrogen, a hydroxy or -OD;

D and  $D_1$  is as defined herein; and

with the proviso that the compounds of Formula (IV) and Formula (V), must contain at least one nitrite, nitrate, thionitrite or thionitrate group.

75. (Original) The composition of claim 74, wherein the polymer is a synthetic polymer or a natural polymer selected from a polyolefin, a polyethylenimine, a polyethyleneimine derivative, a polyether, a polyanhydride, a polyhydroxybutyrate, a polyester, a polyamide, a polyurethane, a biopolymer, a starburst dendrimer, or a mixture thereof.

76. (Currently Amended) The composition of claim 74, further comprising ~~at least one compound that donates, transfers or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium derived relaxing factor, or is a substrate for nitric oxide synthase, or at least one therapeutic agent~~ wherein the therapeutic agent is an antithrombogenic agent, a thrombolytic agent, a fibrinolytic agent, a vasospasm inhibitor, a potassium channel activator, a calcium channel blocker, an antihypertensive agent, an antimicrobial agent, an

antibiotic, an antiplatelet agent, an antimitotic agent, an antiproliferative agent, a microtubule inhibitor, an antisecretory agent, a remodelling inhibitor, an antisense nucleotide, an anti-cancer chemotherapeutic agent, a steroid, a non-steroidal antiinflammatory agent, a selective COX-2 inhibitor, an immunosuppressive agent, a growth factor antagonist or antibody, a dopamine agonist, a radiotherapeutic agent, a heavy metal functioning as a radiopaque agent, a biologic agent, an angiotensin converting enzyme inhibitor, an angiotensin II receptor antagonist, a renin inhibitor, a free radical scavenger, an iron chelator, an antioxidant, a sex hormone, an antipolymerase, an antiviral agent, a photodynamic therapy agent, an antibody targeted therapy agent, a gene therapy agent, or a mixture thereof .

77 - 79. (Cancelled)

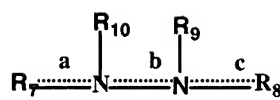
80. (Previously Amended) A medical device comprising the composition of claim 74 or 76, wherein the medical device is a balloon, a catheter tip, a stent, a catheter, a prosthetic heart valve, a synthetic vessel graft, an arteriovenous shunt, a heart valve, a suture, a vascular implant, a drug pump, a drug delivery catheter, plastic tubing, a dialysis bag, a lead, a pacemaker, an implantable pulse generator, an implantable cardiac defibrillator, a cardioverter defibrillator, a defibrillator, a spinal stimulator, a brain stimulator, a sacral nerve stimulator, a chemical sensor or a membrane surface.

81. (Currently Amended) The medical device of claim ~~79~~80, wherein the composition coats all or a portion of the surface of the medical device.

82. (Original) The medical device of claim 80, wherein the composition forms all or part of the medical device.

83 -90 (Cancelled)

91. (Currently Amended) ~~The kit of claim 90, further comprising~~ A kit comprising at least one compound of claim 3 and at least one small-molecule antioxidant and/or at least one angiotensin-converting enzyme inhibitor, beta-adrenergic blocker, cholesterol reducer, calcium channel blocker, angiotensin II receptor antagonist, endothelin antagonist, or renin inhibitor, wherein the small-molecule antioxidant, is a hydralazine compound of Formula (VI), a glutathione, a vitamin C, a vitamin E, a cysteine, a N-acetyl-cysteine, a  $\beta$ -carotene, an ubiquinone, an ubiquinol-10, a tocopherol, a coenzyme Q, or a mixture thereof;  
wherein the hydralazine compound of Formula (VI) is:



(VI)

wherein a, b and c are independently a single or double bond; R<sub>7</sub> and R<sub>8</sub> are each independently a hydrogen, an alkyl, an ester or a heterocyclic ring; R<sub>9</sub> and R<sub>10</sub> are each independently a lone pair of electrons or a hydrogen; with the proviso that at least one of R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub> and R<sub>10</sub> is not a hydrogen.

92 -108 (Cancelled)